

**CLAIMS**

The following is a detailed listing of all claims that are, or were, in the Application.

1-25. Canceled

26. (Currently Amended) A document management system, comprising:

a document storage device configured to store at least one XML electronic document describing metadata related to broadcasting a plurality of television programs, the XML electronic document having a hierarchical structure comprising an upper structural element and a plurality of lower structural elements located below the upper structural element in the hierarchical structure to describe broadcast information and content information for each of the television programs; and

a document receiving device coupled to the document storage device to receive updates to the XML electronic document, each of the received updates including the upper structural element and updated information for a subset of the plurality of lower structural elements, wherein the received update has an upper structure version value for the upper structural element and a respective lower structure version value for each lower structural element in the subset, the upper structure version value being different from one or more of the lower structure version values, has a respective version value and wherein the document receiving device is configured to process one of multiple versions of the XML electronic document according to the version values in the updates to the XML electronic document; ~~wherein date information and time information of contents of the XML electronic document are used in the version values.~~

27. (Canceled)

28. (Currently amended) The document management system of claim 26, wherein a lower structure version value is updated for one of the lower structural elements when content in that lower structural element of the XML electronic document is changed, and

wherein the updated lower structure version value for that lower structural element is used as ~~a corresponding~~ the upper structure version value for the upper structural element.

29. (Previously presented) The document management system of claim 26, wherein each version value includes date and time information according to when said contents of the corresponding element was updated.

30. (Previously presented) The document management system of claim 26, wherein the document receiving device is configured to request the XML document.

31. (Previously presented) The document management system of claim 29, wherein each version value includes date and time information when contents of the corresponding element was changed.

32. (Currently amended) The document management system of claim 28, wherein a type of the content of the lower element is included in the upper structure version value of the upper structural element.

33. (Previously presented) The document management system of claim 26, wherein version information of said contents is defined by a syntax of said electronic document.

34. (Previously presented) The document management system of claim 33, wherein said syntax is XML schema.

35. (Previously presented) The document management system of claim 34, wherein said contents includes at least one member from the group of title, synopsis, review, and casting for each of the television programs.

36. (Currently amended) A method implemented by an apparatus for updating a portion of an electronic document describing metadata related to broadcasting a plurality of television programs, the electronic document having a hierarchical structure that includes an upper structural element and a plurality of lower structural elements located below the upper structural element in the hierarchical structure to describe broadcast information and content information for each of the television programs, wherein each element is based on XML and stored in a client, the method comprising:

requesting an updated version of a subset of said lower structural elements of the electronic document describing metadata, wherein the subset is related to one or more of the television programs scheduled for broadcast;

receiving an update to the electronic document in response to the request, the received update including the upper structural element and said updated version of said subset of the lower structural elements, wherein said received updated version is identified by an upper structure version value for the upper structural element and a respective lower structure version value for each lower structural element in the subset, the upper structure version value being different from one or more of the lower structure version values ~~an element identification including an element version, wherein said element version comprises date information and/or time information;~~ and

updating said subset of the lower structural elements stored in said client with said received updated version of said subset of the lower structural elements without replacing the electronic document in its entirety.

37. (Currently amended) The method of claim 36, wherein said ~~element~~ lower structure version values include[[s]] date and time information according to when contents in the subset of the lower structural elements were updated.

38. (Currently amended) The method of claim 37, wherein said ~~element~~ lower structure version values include[[s]] date and time information according to when said contents in the subset of the lower structural elements were changed.

39. (Currently amended) The method of claim 36, wherein said requesting comprises transmitting a current version of said subset of the lower structural elements, and wherein at least one of said ~~element~~ lower structure version values of said received updated version ~~[[is]] indicates a later version than an element version of~~ said current version.

40. (Currently amended) The method of claim 36, wherein when said subset of the lower structural elements is changed, ~~[[a]] the respective lower structure version value~~ for each of the lower structural elements is updated and the updated lower structure version values ~~are~~ ~~[[is]]~~ reflected in ~~[[a]] the upper structure version value~~ of said upper structural element.

41. (Currently amended) The method of claim 40, wherein a largest value among the lower structure version values for the lower structural elements is used as the upper structure version value of the upper structural element.

42. (Currently amended) The method of claim 41, wherein a type of at least one of the updated lower structural elements is included in the upper structure version value of the upper structural element.

43. (Currently amended) The method of claim 37, wherein ~~said element~~ version information of said contents is defined by a syntax of said electronic document.

44. (Previously presented) The method of claim 43, wherein said syntax is XML schema.

45. (Previously presented) The method of claim 44, wherein said contents includes at least one member from the group of title, synopsis, review, and casting of the one or more television programs.

46. (Currently amended) A method implemented by an apparatus for updating a portion of an electronic document describing metadata related to broadcasting a plurality of television programs, the electronic document having a hierarchical structure that includes an upper structural element and a plurality of lower structural elements located below the upper structural element in the hierarchical structure to describe broadcast information and content information for each of the television programs, wherein each element is based on XML and stored in a client, the method comprising:

requesting from a provider an updated version of a subset of said lower structural elements of the electronic document describing metadata, wherein the subset is related to one or more of the television programs scheduled for broadcast; and

updating said subset of the lower structural elements stored in said client with a version later than a version of said subset of the lower structural elements stored in said client without replacing the electronic document in its entirety, wherein said later version of the subset of the lower structural elements is received in combination with the upper structural element and is identified by an upper structure version value for the upper structural element and a respective lower structure version value for each lower structural element in the subset, the upper structure version value being different from one or more of the lower structure version values ~~an element identification including an element version from said provider, wherein said element version comprises date information and/or time information.~~

47. (Currently amended) A method implemented by an apparatus for processing a response to a request for updating an electronic document describing metadata related to broadcasting a plurality of television programs, the electronic document having a hierarchical structure that includes an upper structural element and a plurality of lower structural elements located below the upper structural element in the hierarchical structure to describe broadcast information and content information for each of the television programs, wherein each element is based on XML and stored in a client and the request for updating the electronic document requests an updated version of a subset of the lower structural elements, the method comprising:

updating said subset of the lower structural elements stored in said client with the updated version of said subset of the lower structural elements without replacing the electronic document in its entirety, wherein said updated version of the subset of the lower structural elements is received in combination with the upper structural element and is identified by an upper structure version value for the upper structural element and a respective lower structure version value for each lower structural element in the subset, the upper structure version value being different from one or more of the lower structure version values ~~an element identification including an element version, wherein said element version comprises date information and/or time information.~~

48. (Currently amended) The method of claim 47, further comprising:

receiving an update to the electronic document in response to the request, the received update including the upper structural element and said updated version of said subset of the lower structural elements identified by said upper structure version value and lower structure version values ~~element identification and said element version~~ from a provider.

49. (Currently amended) The method of claim 47, wherein said ~~element~~ version lower structure values ~~include~~[[s]] date and time information according to when said metadata in the subset of the lower structural elements were updated.

50. (Currently amended) The method of claim 49, wherein said ~~element~~ lower structure version values ~~include~~[[s]] date and time information according to when said metadata in the subset of the lower structural elements were changed.

51. (Previously presented) The method of claim 47, wherein said request comprises a selected version of said subset of the lower structural elements, and wherein said received updated version of said subset of the lower structural elements is later than said selected version.

52. (Currently amended) The method of claim 47, wherein when said subset of the lower structural elements is changed, [[a]] the lower structure version value for each of the lower structure is updated and the updated lower structure version values are [[is]] reflected in [[a]] the upper structure version value of said upper structural element.

53. (Currently amended) The method of claim 52, wherein a largest value among the lower structure version values for the lower structural elements is used as the upper structure version value of the upper structural element.

54. (Currently amended) The method of claim 53, wherein a type of at least one of the updated lower structural elements is included in the upper structure version value of the upper structural element.

55. (Currently amended) The method of claim 47, wherein ~~said element~~ version information is defined by a syntax of said electronic document, and wherein said syntax is XML schema.

56. (Previously presented) The method of claim 47, wherein said metadata includes at least one member from the group of title, synopsis, review, and casting for one or more of said television programs.

57. (Canceled)

58. (Currently amended) A method implemented by an apparatus for updating a portion of an electronic document describing metadata related to broadcasting a plurality of television programs, the electronic document having a hierarchical structure that includes an upper structural element and a plurality of lower structural elements located below the upper structural element in the hierarchical structure to describe broadcast information and content information for each of the television programs, wherein each element is based on XML, the method comprising:

receiving a request from a client for an updated version of a subset of said lower structural elements of the electronic document describing metadata, wherein the subset is related to one or more of the television programs scheduled for broadcast;

determining whether a provider has a capability of handling said request for the updated version; and

supplying an update to the electronic document in response to the request, the supplied update including the upper structural element and said updated version of said subset of the lower structural elements in accordance with a determined result, wherein said updated version is identified by an upper structure version value for the upper structural element and a respective lower structure version value for each lower structural element in the subset, the upper structure version value being different from one or more of the lower structure version values~~an element identification including an element version, wherein said element version comprises date information and/or time information.~~

59. (Previously presented) The method of claim 58, wherein said request for said updated version of said subset of the lower structural elements identifies said subset of the lower structural elements using element identification and a current element version.

60. (Currently amended) The method of claim 58, further comprising:  
identifying a version of said subset of the lower structural elements as being later than a requested version of said subset of the lower structural elements in said provider as said updated version of said subset of the lower structural elements.

61. (Currently amended) The method of claim 58, wherein said ~~element~~ lower structure version values include[[s]] date and time information according to when said metadata in the subset of the lower structural elements were updated.

62. (Currently amended) The method of claim 61, wherein said ~~element~~ lower structure version values include[[s]] date and time information according to when said metadata in the subset of the lower structural elements were changed.



63. (Currently amended) The method of claim 58, wherein when said subset of the lower structural elements is changed, ~~[[a]]~~ the lower structure version value for each of the lower structural elements is updated and the updated version value is reflected in ~~[[a]]~~ the upper structure version value of said upper structural element.

64. (Currently amended) The method of claim 63, wherein a largest value among the lower structure version values for the lower structural elements is used as the upper structure version value of the upper structural element.

65. (Currently amended) The method of claim 64, wherein a type of at least one of the updated lower structural elements is included in the upper structure version value of the upper structural element.

66. (Currently amended) The method of claim 58, wherein ~~said element~~ version information is defined by a syntax of said electronic document.

67. (Previously presented) The method of claim 66, wherein said syntax is XML schema.

68. (Previously presented) The method of claim 67, wherein said metadata includes at least one member from the group of title, synopsis, review, and casting of the one or more television programs.

69. (Currently amended) A method implemented by an apparatus for replying to a request for updating an electronic document describing metadata related to broadcasting a plurality of television programs, the electronic document having a hierarchical structure that includes an upper element and a plurality of lower structural elements located below the upper structural element in the hierarchical structure to describe broadcast information and content information for each of the television programs, wherein each element is based on XML and stored in a client, the method comprising:

supplying said client with an update to the electronic document in response to the request, the supplied update including the upper structural element and an updated version of a subset of said lower structural elements of the electronic document describing metadata, wherein the subset is related to one or more of the television programs scheduled for broadcast, and wherein the updated version is identified by an upper structure version value for the upper structural element and a respective lower structure version value for each lower structural element in the subset, the upper structure version value being different from one or more of the lower structure version values~~an element identification including an element version, wherein said element version comprises date information and/or time information.~~

70. (Currently amended) A method implemented by an apparatus for managing an electronic document describing metadata related to broadcasting a plurality of television programs, the electronic document having a hierarchical structure that includes an upper structural element and a plurality of lower structural elements located below the upper structural element in the hierarchical structure to describe broadcast information and content information for each of the television programs, wherein each element is based on XML and stored in a client, the method comprising:

maintaining a version information for each of said lower structural elements of the electronic document describing metadata related to the television programs, wherein said version information comprises date information and/or time information; and

transmitting to the client an update to the electronic document, the transmitted update including the upper structural element and an updated version of said subset of the lower structural elements, wherein said updated version is identified by an upper structure version value for the upper structural element and a respective lower structure version value for each lower structural element in the subset, the upper structure version value being different from one or more of the lower structure version value and being based on an~~element identification including~~ the version information for the subset of the lower structural elements.

71. (Cancelled)

72. (Previously presented) The method of claim 70, wherein the version information includes date and time information according to when said metadata in the subset of said lower structural elements were updated.

73. (Previously presented) The method of claim 72, wherein the version information includes date and time information according to when said metadata in the subset of the lower structural elements were changed.

74. (Previously presented) The method of claim 70, further comprising:  
receiving a request for the updated version of said subset of the lower structural elements.

75. (Currently amended) The method of claim 70, wherein when said subset of the lower structural elements is changed, [[a]] the lower structure version value for each of the lower structural elements is updated and the updated lower structure version value is reflected in [[a]] the upper structure version value of said upper structural element.

76. (Currently amended) The method of claim 75, wherein a largest value among the lower structure version values for the lower structural elements is used as the upper structure version value of the upper structural element.

77. (Currently amended) The method of claim 76, wherein a type of at least one of the updated lower structural elements is included in the upper structure version value of the upper structural element.

78. (Currently amended) The method of claim 70, wherein said ~~element~~ version information is defined by a syntax of said electronic document.

79. (Previously presented) The method of claim 78, wherein said syntax is XML schema.

80. (Previously presented) The method of claim 79, wherein said metadata includes at least one member from the group of title, synopsis, review, and casting of one or more of the television programs.

81-86. (Canceled)